



[Time: 3 Hours]

[Max. Marks: 75]

Cellular and Molecular Pharmacology

Q.P. CODE: 5136

Your answers should be specific to the questions asked.

Draw neat, labeled diagrams wherever necessary.

LONG ESSAY (Answer any Three)

3 X 10 = 30 Marks

1. What is cell cycle? Discuss the various phases of eukaryotic cell cycle and write the significance of cell cycle inhibitors.
2. Discuss the principles involved in recombinant DNA technology and write their applications.
3. Explain different gene sequencing and genomic mapping methods.
4. Classify various types of cell cultures with examples. Explain the media requirements and techniques of cell cultures.

SHORT ESSAY (Answer any Nine)

9 X 5 = 45 Marks

5. Write a note on Biosimilars.
6. Explain the cell signalling through GPCR.
7. Describe the concepts of microarray techniques.
8. Discuss the role of genomics in research.
9. What is cryopreservation? Describe in brief its role in cell culture.
10. Discuss the role of siRNA in gene silencing.
11. Explain the principle and significance of SDS Page.
12. Explain the role of nuclear receptor in pharmacology.
13. Explain about voltage gated ion channel.
14. Write the functions of proteins and polysaccharide with examples.

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